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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,754	11/15/2001	Darrell G. Hill	SC10776P D01	3259

23330 7590 09/12/2003

MOTOROLA, INC.  
CORPORATE LAW DEPARTMENT - #56-238  
3102 NORTH 56TH STREET  
PHOENIX, AZ 85018

[REDACTED] EXAMINER

MANDALA, VICTOR A

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2826

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/007,754	HILL ET AL.	
	Examiner Victor A Mandala Jr.	Art Unit 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 15 November 2001.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 10-14 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 10-14 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 10, 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,392,258 Hirata et al.

1. Referring to claim 10, a semiconductor component comprising: a semiconductor substrate, (Figure 1 #1), having an emitter layer, (Figure 1 #5), a base layer, (Figure 1 #4), and a collector layer, (Figure 1 #3); a dielectric layer, (Figure 1 #14), formed over a passivation ledge, (Figure 1 examiner's label #100), in the emitter layer, (Figure 1 #5); and a base contact, (Figure 1 #9), disposed on the dielectric layer, (Figure 1 #14).
2. Referring to claim 12, a semiconductor component, wherein a region of the base layer, (Figure 1 #4), and a region of the collector layer, (Figure 1 #3), form boundaries that are substantially aligned to a first edge, (Figure 1 examiner's label #200), of the base contact, (Figure 1 #9), that is remote from the emitter layer, (Figure 1 #5).
3. Referring to claim 13, a semiconductor component, wherein the base layer, (Figure 1 #4), is comprised of a p type material, (Col. 2 Lines 20-21).
4. Referring to claim 14, a heterojunction bipolar transistor comprising: a substrate layer, (Figure 1 #1), a subcollector layer, (Figure 1 #2), a collector layer, (Figure 1 #3), a base layer,

(Figure 1 #4), and an emitter layer, (Figure 1 #5), each layer formed on top of the preceding layer; an emitter mesa and a thin passivating ledge, (Figure 1 examiner's label #100), formed in the emitter layer, (Figure 1 #5); base contacts, (Figure 1 #9), depositing on the base layer, (Figure 1 #4), wherein the base contacts, (Figure 1 #9), are self aligned with respect to the passivating ledge, (Figure 1 examiner's label #100).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,392,258 Hirata et al.

5. Referring to claim 11, a semiconductor component, wherein the dielectric layer, (Figure 1 #14), is comprised of a material selected from the group consisting of silicon nitride, aluminum nitride, silicon dioxide, silicon oxynitride, and mixtures thereof.

Hirata et al. discloses the claimed invention except for the dielectric layer comprising the materials as claimed in claim 11. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the dielectric layer out of the materials as claimed in claim 11 instead of a polyimide resin as taught by Hirata et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor A Mandala Jr. whose telephone number is (703) 308-6560. The examiner can normally be reached on Monday through Thursday from 8am till 6pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

VAMJ  
September 8, 2003

*N. MANDALA, JR.*  
NATHAN M. FLYNN  
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